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ABSTRACT

A series of studies were conducted to develop a communication openness measure (COM) based on the concept of openness as specific message sending and receiving behaviors. A model of communication behaviors was first developed, consisting of three parts--who communicates to whom, how, and about what? Based on the model, two forms of a 120-item questionnaire were constructed. The first asked whether each of the 120 behaviors was characteristic of open communication, the second asked if they were characteristic of closed behavior. Both forms of the questionnaire were completed by 141 members of the Industrial Communication Council, and by 292 students in a freshman communication course. Analysis resulted in the identification of 48 open communication behaviors and 7 closed behaviors. The subsequent COM contained 55 Likert type items, which field testing then reduced to 19. This 19-item COM was then completed by 495 nurses, and further analysis reduced the instrument to 13 items. The final COM was shown to have excellent reliability and adequate validity. The process of developing this instrument suggested the following conclusions: (1) communication openness is a central variable in organizational communication; (2) open communication behaviors involve asking for information, listening to information, and acting on information; (3) given the nature of open communication behaviors, subordinates are generally open to their superiors; (4) open communication is a vehicle for handling nonroutine and negative information; and (5) open communication is not synonymous with disclosure, and is a receiver-oriented concept rather than a sender-oriented one. (HTH)

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THE DEVELOPMENT OF A MEASURE OF PERCEIVED COMMUNICATION OPENNESS

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THE DEVELOPMENT OF A MEASURE OF PERCEIVED COMMUNICATION OPENNESS

ABSTRACT

Open communication has been shown to be related to job satisfaction, organizational performance, and role clarity. Most measures of communication openness have been criticized as simplistic and imprecise. This paper describes the development of a Communication Openness Measure (C.O.M.) based on a well defined construct, with excellent reliability, and adequate validity.

The Development of a Measure of
Perceived Communication Openness

One of the most important variables in the organizational communication literature is openness. Openness has been described as one of the essential characteristics of an effective organization (Haney, 1967; Likert, 1967; Redding, 1972; French and Bell, 1973). Research has shown that open communication is positively correlated with organizational performance (Indik, Georgoupolis, and Seashore, 1961; Willits, 1967; O'Reilly and Roberts, 1977; Rogers, 1978), job satisfaction (Burke and Wilcox, 1969; Baird, 1973; Rogers, 1973; Ringa, 1976; Jablin, 1977; Trombetta, 1981; Klauss and Bass, 1982), role clarity (Ringa, 1977; Klauss and Bass, 1982), and information adequacy (Rogers, 1973; Trombetta, 1981).

The concept of communication openness has been around since the 1930's. Serious attempts to define and study the concept began with the laboratory experiments of Bavelas and Barrett (1951). At various times communication openness has been treated as synonymous with listening, honesty, frankness, trust, supportiveness, and a variety of similar concepts. Redding (1972) attempted to clarify and systematically describe the dimensions of communication openness. He argued that openness included both message sending and message receiving behaviors, with the observation that superiors' message receiving behaviors were especially important. Redding's model of the dimensions of open communication appears in Figure 1. Focusing on task

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FIGURE 1 about here.

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related topics, Baird (1973) and Stull (1974) supported the notion that communication openness involves both message sending and message receiving behaviors. Baird (1973) also noted that similar behaviors described openness in both superior-subordinate and peer-peer dyads. While Baird found open communication behaviors more related to task than to non-task communication topics, earlier studies by Argyris (1966) and

Willits (1967) had identified non-task topics such as personal opinions, suggestions, and new ideas as characteristic of open communication.

Thus while there is no commonly accepted definition of communication openness, the concept seems to incorporate the message sending and message receiving behaviors of superiors, subordinates, and peers with regard to task, personal, and innovative topics.

MEASURING COMMUNICATION OPENNESS

The earliest studies of communication openness were the laboratory studies of communication networks in which openness was defined as a function of the number of communication channels available to a group. In these studies the degree of openness was controlled and its effects were measured. These studies demonstrated the importance of open communication. But the laboratory permits degrees of control that a natural organization does not. The researcher interested in studying communication openness in an on-going organization must develop ways of measuring openness. Most early studies of openness (Indik, Georgoupolis, and Seashore, 1961; Willits, 1967; Likert, 1967; Burke and Wilcox, 1969) and some more recent studies (O'Reilly and Roberts, 1977; Klauss and Bass, 1982) treated openness as a simple gestalt variable. The logic of this is based on the assumption that open communication is a unidimensional construct. Redding (1972) has pointed out that measures of communication openness used in these studies tend to be over simplified, situational, and lacking in precision or focus. For example, Argyris (1966) observed but did not measure openness. Indik, Georgoupolis, and Seashore (1961), Burke and Wilcox (1969), O'Reilly and Roberts (1977), and Klauss and Bass (1982) each used two questions to measure openness. Willits (1967) and Likert (1967) each used four questions. Reading (1972) argued that a more appropriate measure of communication openness would be based on specific communicative behaviors which could be described as open.

While each of these studies has contributed valuable knowledge to our understanding of communication openness, none have addressed the total concept of openness as described above. The purpose of this paper

is to describe a series of studies which have attempted to develop a perceptually based Communication Openness Measure (COM) based on the concept of openness as specific message sending and receiving behaviors.

DEVELOPMENT OF THE C.O.M.

The first step in this process was to develop a model of communication behaviors which could be tested for openness. The model has three parts: 1. WHO communicates with WHOM, 2. in what WAY, 3. about what TOPICS. The first part of the model was operationalized to include three relationships - superior to subordinate, subordinate to superior, and peer to peer. The second part was operationalized to include four types of behavior - message sending (telling and acting) and message receiving (asking and listening). The third part was operationalized to include ten topics - instructions, commands, complaints, criticisms, personal opinions, bad news, new ideas, rumors, suggestions, and arguments. These topics were derived from the questions used in earlier studies of openness.

Based on the model a questionnaire was constructed. The three parts of the model were systematically rotated to produce a 120 item (3 x 4 x 10) questionnaire. Two forms of the questionnaire were created. The first asked whether each of the 120 behaviors was characteristic of open communication. The second asked whether each of the 120 behaviors was characteristic of closed communication. The two forms of the questionnaire acted as checks on each other. Two groups of judges responded to each form of the questionnaire. The first group included 141 members of the Industrial Communication Council. Persons in this organization were selected because their professional interest suggested knowledge, experience, and expertise particularly sensitive to communication behaviors within organizations. The second group included 292 undergraduate students enrolled in the Communication 101 course at the State University of New York at Buffalo. This population was selected because the course included units on "open and closed systems" and "organizational communication" . Thus the students could be

expected to have some familiarity with the concept of the survey. The two groups acted as checks on each other.

Separate procedures were employed for administering a mail survey to the expert judges and an in-class survey to the student judges. The expert judges were randomly assigned to one of two groups. Seventy-one were mailed the questionnaire of open communication behaviors. Seventy were mailed the survey of closed communication behaviors. All mailings included a cover letter, answer sheet, and return envelope. Of the 141 surveys mailed, thirty-two were returned. Six of these were incomplete and were excluded from the analysis. The 20% rate of usable returns was not unusual considering that the questionnaire was long, dull, and offered no immediate benefit to the respondents.

The student judges were also randomly assigned to one of two groups. One hundred and fifty students received the survey of open communication behaviors. One hundred and forty-two received the survey of closed communication behaviors. All received an answer sheet. The surveys were distributed in two mass lecture sections. The students had been told at an earlier date to expect the survey. Of the 292 responses, 32 were excluded from analysis because they were incomplete. This resulted in an 89% rate of usable returns.

Data were analyzed through a five step algorithm which discriminated open communication behaviors from closed communication behaviors for each of the two groups of judges using multiple t-tests for related measures to determine significance. This procedure resulted in the identification of 48 behaviors characterizing open communication and 7 behaviors characterizing closed communication. An extended discussion of the analysis and results of this survey can be found in Rogers (1976). A Chi-square test for goodness-of-fit on the superior-subordinate-peer and message sending-receiving dimensions revealed that the identified items were representative of these key dimensions of the communication openness construct ($X^2 = .224$, $df = 2$).

Since the Chi-square indicated that the resulting items were representative of the communication openness concept, the next step was to develop a paper and pencil instrument for field testing. The

resulting Communication Openness Measure (C.O.M.) contained fifty-five Likert type items such as the following:

> In this organization, supervisors frequently ask subordinates for suggestions.
> a. strongly agree
> b. agree
> c. neither agree nor disagree
> d. disagree
> e. strongly disagree.

The questionnaire was field tested in two studies. Ringa (1976) studied 108 managers in a public utility to examine the relationship of communication openness to job satisfaction and role clarity. Using the full range of communication openness items he encountered severe subscale reliability problems with reliabilities ranging from .32 to .99. Rogers (1978) studied 96 professionals in related service departments to examine the relationship of communication openness to innovation and organizational performance. He also encountered reliability problems. Using the SPSS reliability analysis routine the COM data was reanalyzed. This analysis showed that the overall reliability of the COM would be increased if many of the individual items were deleted (i.e. reliability was higher without the item than with it). Based on this analysis the number of items in the COM was reduced from 55 to 19. Among the items eliminated were all of the items related to closed communication behaviors and all of the items referring to behaviors which were expected to occur infrequently. Since few of these items directly related to common open behaviors their loss was not significant. When these items were deleted the reliability estimate of the COM was found to be .868.

ANALYSIS OF THE C.O.M.

In order to analyze the 19 item COM more fully Trombetta (1981) administered the instrument to 495 hospital nurses in four Upstate New York community hospitals. The responses of the 495 nurses were submitted to principle components factor analysis and varimax rotation. The scree procedure was used to determine the number of factors present. An item was considered loaded on a factor if it had a prime loading

greater than or equal to .60 and no secondary loadings greater than the variance accounted for by the prime loading. Although we believed that communication openness was a unidimensional construct, the original factor analysis did not call for a specific number of factors to be extracted. When the eigenvalues obtained in the analysis were plotted, the scree procedure clearly indicated the presence of a two factor solution. A second analysis requesting a two factor solution was obtained. The results of this analysis indicated that the two factors were artificially created as a result of the wording of the items and not their content. Thus, the single factor extracted from the unrotated matrix was used. This factor explained 68.2% of the observed variance. From this analysis 13 items whose loadings on the first factor were greater than .60 were selected for use as the COM. All 13 of these items discriminated between the upper and lower 27 per cent of the distribution (as measured by t-tests). The corrected reliability for the 13 item COM was .885. The 13 item COM is shown in Table 1.

TABLE 1. about here

THE VALIDITY OF THE C.O.M.

Determining the validity of any self report measure is difficult, and the COM is no exception. But there is some evidence of validity. Examination of the items in Table 1 is suggestive of face validity. The COM incorporates the message sending and receiving behaviors of superiors and peers related to suggestions, criticism, complaints, personal opinions, new ideas, and bad news. A Chi-square test for goodness-of-fit of the distribution of the 13 items along the message sending-receiving dimension shows no significant difference from the distribution predicted by the communication openness construct (X^2 = .673, df = 1). This suggests that the COM has construct validity at least along the most critical dimension of the concept.

As part of a larger study, Billups (1978) compared the 19 item COM to other openness measures. In order to minimize the effects of common method variance, he used specificity and sensitivity measures rather than correlations. He found significant overlaps in specificity and sensitivity between COM and the Indik, Georgopoulos, and Seashore (.636, .684), Burke and Wilcox (.679, .733), and Likert (.759, .789) scales. While the Likert scales were most reliable, the COM was most specific and sensitive. This suggests strong concurrent validity.

The COM (in various forms) has been consistent with other measures of communication openness in demonstrating relationships between openness and job satisfaction (Rogers, 1973; Ringa, 1976; Trombetta, 1981), organizational performance (Rogers, 1978), and role clarity (Ringa, 1976). This suggests strong predictive validity. Taken as a whole the evidence supports the COM as a valid measure of communication openness.

DISCUSSION

The results of our attempts to develop a measure of perceived communication openness have been positive. The Communication Openness Measure (COM) is based on an empirically supported model of the communication openness construct. The 13 item COM has excellent reliability. The COM has demonstrate adequate validity. Its potential for research and application in organizational settings is excellent.

The COM is easy and inexpensive to administer in terms of both time and money. This makes it possible for a researcher to rapidly score the instrument, analyze the data, and communicate the results to interested persons within a client organization. The demonstrated reliability and validity of the COM make it useful to the researcher who is attempting to explore relationships between communication openness and other organizational and communication variables. Further uses of the instrument should refine its properties and make it even more useful to those studying communication in organizations.

The development of the COM has has led us to several speculative conclusions about the nature of communication openness. First,

communication openness is a central variable in organizational communication. We have observed that differences in the degree of openness mean real differences in the internal communication patterns of organizations and real differences in levels of organizational performance. Second, open communication behaviors involve asking for information, listening to information, and acting on information received. Openness means being receptive and responsive to information from others. Third, given the nature of open communication behaviors, we have observed that subordinates are generally open to their superiors. They ask for information, listen to their supervisors, and act on the information they receive. Increasing communication openness requires that superiors be more open to their subordinates and coworkers be more open to their peers. Fourth, open communication is a vehicle for handling non-routine and negative information. The content of open communication is task oriented, but not task confirming. It does not include routine orders, instructions, or reports. It does include the bad, the unusual, the exceptional, and the novel. Open communication contains the identification of problems and opportunities. Open communication is a preliminary step in organizational problem solving. This explains why open communication is related to organizational performance. When communication is open, organizations are able to identify their problems early and solve them before they get out of hand. When communication is closed, organizations do not identify problems until they become crises. Finally, open communication is not synonymous with disclosure. It is not honesty, frankness, nor amount of information provided. Open communication is a receiver oriented concept not a sender oriented one. Hopefully these speculations will lead to testable hypotheses about open communication.

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Figure 1.

THE DIMENSIONS OF COMMUNICATION OPENNESS
Adapted from Redding (1972), p. 405

	Message Sending	Message Receiving
Superiors' Behavior	From Superior To Subordinate (downward)	To Superior From Subordinate (upward)
Subordinates' Behavior	From Subordinate To Superior (upward)	To Subordinate From Superior (downward)
Peers' Behavior	From Peer To Peer (horizontal)	To Peer From Peer (horizontal)

Table 1.

FACTOR LOADINGS OF THE C.O.M.: UNROTATED MATRIX

COM Factor	Factor Loading
Supervisors ask for suggestions	.662*
People complain to supervisors	.274
Supervisors act on criticism	.648*
People share new ideas with coworkers	.296
Supervisors listen to complaints	.632*
People ask supervisors' opinions	.627*
Supervisors follow up on peoples' opinions	.708*
People follow up supervisors' new ideas	.592
Supervisors suggest new ideas	.628*
People ask coworkers for suggestions	.775*
Supervisors listen to bad news	.708*
People give advice to supervisors	.361
Supervisors follow up bad news	.527
People listen to new ideas from coworkers	.656*
Supervisors listen to new ideas	.724*
People ask supervisors for criticism	.495
Supervisors follow up on suggestions	.756*
Supervisors ask for personal opinions	.719*
People listen to supervisors' suggestions	.602*

* included in 13 item C.O.M.